

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Chessell et al.**

Serial No. **10/798,920**

Filed: **March 11, 2004**

For: **Profiling Data in a Data Store**

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Group Art Unit: **2163**

Examiner: **Lie, Angela M.**

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

35525
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on June 7, 2007.

A fee of \$500.00 is required for filing an Appeal Brief. Please charge this fee to IBM Corporation Deposit Account No. 09-0447. No additional fees are believed to be necessary. If, however, any additional fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-64

B. STATUS OF ALL THE CLAIMS IN APPLICATION

Claims canceled: None

Claims withdrawn from consideration but not canceled: None

Claims pending: 1-64

Claims allowed: None

Claims rejected: 1-64

Claims objected to: 1 and 17

C. CLAIMS ON APPEAL

The claims on appeal are: 1-64

STATUS OF AMENDMENTS

No amendments were filed after the final Office action of March 7, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of claim 1 is directed to a method for extracting data from a data store comprising a first set of one or more data items, the method comprising the steps of: (Specification, p. 1, ll. 23-25; Specification, p. 3, ll. 10-12; figure 1, reference numeral 104)

creating a selected set comprising a second set of one or more data items in accordance with a selection rule; (Specification, p.3, ll. 12-14; figure 1, reference numeral 100)

creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; (Specification, p. 3, ll. 15-18; figure 1, reference numeral 102)

responsive to a determination that an intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data items from the data store in accordance with the selection rule; and (Specification, p. 3, ll. 18-22; figure 1, reference numeral 108)

responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set. (Specification, p. 3, ll. 22-25; figure 1, reference numeral 112)

B. CLAIM 17 - INDEPENDENT

The subject matter of claim 17 is directed to a computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for performing, when said product is run on a computer, the method of, extracting data from a data store comprising a first set of one or more data items, the method comprising the steps of: (Specification, p. 4, ll. 14-18)

creating a selected set comprising a second set of one or more data items in accordance with a selection rule; (Specification, p. 4, ll. 18-20; figure 2, reference numeral 208)

creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; (Specification, p. 4, ll. 21-25; figure 2, reference numeral 210)

responsive to a determination that the intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data items from the data store in accordance with

the selection rule; and (Specification, p. 4, ll. 25-28; figure 1, reference numeral 108)

responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set. (Specification, p. 4, ll. 29-32; figure 1, reference numeral 114)

C. CLAIM 33 - INDEPENDENT

The subject matter of claim 33 is directed to a computer program product stored on a computer usable medium, comprising: (Specification, p. 5, ll. 2)

computer readable program means for storing data, the means for storing data being operable to store a first set of one or more data items; (Specification, p. 5, ll. 3-5; figure 3, reference numeral 322)

computer readable program means for creating a selected set, wherein the selected set comprises a second set of one or more data items in accordance with a selection rule; (Specification, p. 5, ll. 5-8; figure 3, reference numeral 324)

computer readable program means for generating a profile of the first set of one or more data items, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; and (Specification, p. 5, ll. 8-13; figure 3, reference numeral 326-328)

computer readable program means for determining if there is a non-empty intersection of the selected set and the profile set. (Specification, p. 5, ll. 13-15; figure 3, reference numeral 330)

D. CLAIM 49 - INDEPENDENT

The subject matter of claim 49 is directed to an apparatus having a data store operable to store a first set of one or more data items, the apparatus further comprising: (Specification, p. 5, ll. 16-18; figure 4, reference numeral 402)

a selector for creating a selected set, wherein the selected set comprises a second set of one or more data items in accordance with a selection rule; (Specification, p. 5, ll. 19-22; figure 4, reference numeral 404)

a profiler for generating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; and (Specification, p. 5, ll. 22-26; Figure 4, reference numeral 406)

a selection checker for determining if there is a non-empty intersection of the selected set and the profile set. (Specification, p. 5, ll. 26-27; figure 4, reference numeral 408)

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to review on appeal are as follows:

A. GROUND OF OBJECTION

The Examiner objects to claims 1 and 17.

B. GROUND OF REJECTION 1 (Claims 1, 9-13, 15, 17, 24-29, 31, 33, 40-45, 47, 49, 56-61, and 63)

Whether claims 1, 9-13, 15, 17, 24-29, 31, 33, 40-45, 47, 49, 56-61, and 63 fail to be anticipated under 35 U.S.C. § 102 in view of *Seifert*, Automated Resource Management System, U.S. Patent Application Publication 2002/0194179 (December 19, 2002) (hereinafter “*Seifert*”).

C. GROUND OF REJECTION 2 (Claims 2-7, 18-23, 34-39, and 50-55)

Whether the Examiner failed to state a *prima facie* obviousness rejection against claims 2-7, 18-23, 34-39, and 50-55 under 35 U.S.C. § 103 in view of *Siefert* and *Asherman*, Database Communication System and Method for Communicating with a Database, U.S. Patent 6,738,775 (May 18, 2004) (hereinafter “*Asherman*”).

D. GROUND OF REJECTION 3 (Claims 14, 30, 46, and 62)

Whether the Examiner failed to state a *prima facie* obviousness rejection against claims 14, 30, 46, and 62 under 35 U.S.C. § 103 in view of *Siefert* and *Kolovson*, Fast Database Failover, U.S. Patent 5,951,695 (September 14, 1999) (hereinafter “*Kolovson*”).

E. GROUND OF REJECTION 4 (Claims 16, 32, 48, and 64)

Whether the Examiner failed to state a *prima facie* obviousness rejection against claims 16, 32, 48, and 64 under 35 U.S.C. § 103 in view of *Siefert* and *Jiang et al.*, Adaptive Prefetching for Computer Network and Web Browsing with a Graphic User Interface, U.S. Patent 6,385,641 (May 7, 2002) (hereinafter “*Jiang*”).

ARGUMENT

A. GROUND OF OBJECTION

The Examiner objects to claims 1 and 17 on the basis that the term, “determination that the intersection of the selected set and the profile set is empty,” is improper because the Examiner asserts that no result exists if the intersection is empty. However, the objection is erroneous because the claim goes on to state that the method provides an indication that the data store does not include data items in the selected set. Therefore, a positive result exists, namely that the intersection is empty, and a positive action is taken in response to this result, namely to provide the claimed indication.

Additionally, changing the claimed term from “empty” to “exist” would change the meaning of the claim. In mathematics, the number zero exists in the set of real numbers. For example, if the claimed intersection is empty, the intersection exists, even if empty. If the intersection is claimed as “not existing,” then no intersection exists at all in the first place. In this case, the claim would be rendered indefinite and incorrect because the claim would contradict itself. In particular, the claim would recite the existence of the intersection, and in the very next phrase state that the intersection does not exist. This result is erroneous. Therefore, the objection is erroneous and should be overturned.

B. GROUND OF REJECTION 1 (Claims 1, 9-13, 15, 17, 24-29, 31, 33, 40-45, 47, 49, 56-61, and 63)

The appeal to the first ground of rejection is whether claims 1, 9-13, 15, 17, 24-29, 31, 33, 40-45, 47, 49, 56-61, and 63 fail to be anticipated under 35 U.S.C. § 102 in view of *Seifert*. Claim 1 is a representative claim of this grouping of claims. Claim 1 is as follows:

1. A method for extracting data from a data store comprising a first set of one or more data items, the method comprising the steps of:
 - creating a selected set comprising a second set of one or more data items in accordance with a selection rule;
 - creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule;
 - responsive to a determination that an intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data

items from the data store in accordance with the selection rule; and responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set.

Regarding claim 1, the Examiner states that:

As to claims 1, 17, 33 and 49, Seifert discloses a method for extracting data from data store comprising a first set of one or more data items, the method comprising, the steps of: creating a selected set comprising a second set, of one or more data items in accordance with a selection rule (paragraph 62, wherein the search criteria are considered to form a set according to the selection rule); creating a profile of the data store (paragraph 58, wherein profile describes resources, and set of those descriptive terms form a set), the profile comprising a profile rule defining a profile set (wherein the rule is the level of descriptiveness), wherein the profile set comprises a third set of one or more data items in accordance with the profile rule (i.e. placing words in the set that best describe a repository); responsive to a determination that an intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data items from the data store in accordance with the selection rule (paragraph 53, i.e. relevant results); and responsive to a determination that an intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set (if there is no intersection, there is no match to the searching criteria (set established based in the selection rule)).

Final office action of March 7, 2007, pp. 2-3 (emphasis in original).

The rejection is in error because *Seifert* does not teach the feature of, “creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule,” as in claim 1. *Seifert* also does not teach the feature of, “responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set,” as in claim 1.

Appellants first address the creating step. The Examiner asserts that *Seifert* teaches this claimed step in the following portion of *Seifert*:

[0058] At present, for ease of explanation, the RESOURCES can be viewed as computer files. However, as will be seen shortly, the RESOURCES actually include a vastly larger, and more diverse, collection of objects than mere computer files. RESOURCES include (a) data, (b) information, and (c) knowledge, both as these terms are generally defined, and also as defined by

computer scientists. This data, information, and knowledge can take the form of computer-downloadable data, or other forms, such as printed matter. Each RESOURCE has an associated PROFILE, which contains descriptive information about the RESOURCE. FIG. 48 illustrates an exemplary PROFILE. The user of a PC uses the PROFILES to locate RESOURCES of interest by searching through the PROFILES.

Seifert, paragraph 0058.

Generally, *Seifert* teaches containing a descriptive profile for each resource in a data processing system, allowing users to search all profiles and to search the profiles according to fields of a database, such as by location of the resources or by category of the resources. *Seifert*, Abstract. The user can order delivery of a selected resource, and the system causes delivery of the resource to be executed irrespective of the form of the resource. *Seifert*, Abstract. A provider of a new resource can limit access to the new resource by identifying users who are authorized to obtain access to the resource. *Seifert*, Abstract.

The particular portion of *Seifert* cited by the Examiner teaches that resources can be data, information, and knowledge in the form of computer-downloadable data or printed matter. Each resource has an associated profile which contains descriptive information about the resource. *Seifert* also cites Figure 48, which appears to be a screen shot. However, that figure is indecipherably garbled in any copy obtainable by Appellants.

The cited portion of *Seifert* does not teach the claimed feature of, “creating a profile of the data store, the profile comprising a *profile rule* defining a *profile set*, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule,” as in claim 1. The Examiner asserts that “the rule is the level of descriptiveness.” However, this assertion is in error. *Seifert* does not describe a “level of descriptiveness” of a profile anywhere or in any form. *Seifert* only mentions the term “descriptiveness” or “description” five times total, and in each case only briefly, and not in relation to this feature of claim 1. In the cited portion, *Seifert* only states that the profile contains descriptive information. Later, *Seifert* states that:

[0114] Every RESOURCE carries with it a PROFILE. Each PROFILE contains important information about the RESOURCE, such as a description of the RESOURCE, where it is located, etc. The LOCATE AND VIEW option allows a user to view the PROFILES.

Seifert, paragraph 0114.

Seifert only states that the profile contains a description of the resource. In paragraph 0059, *Seifert* states that the description is a title. In paragraph 0114, *Siefert* states that the description can be where the resource is located. However, contrary to the Examiner's statement, *Seifert* provides no "level" of descriptiveness.

Additionally, *arguendo*, if *Seifert* did teach a "level of descriptiveness," this feature is not equivalent to a "profile rule," as claimed and is not equivalent to a "profile set," as claimed. A description is not a rule. Therefore, *Siefert* does not teach a "profile rule," as recited in claim 1. *Seifert*'s description also does not describe a "profile set," which is a term well-defined in the specification and understood by those of ordinary skill in the art. Therefore, *Seifert* does not teach the claimed feature of, "creating a profile of the data store, the profile comprising a *profile rule* defining a *profile set*, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule," as in claim 1. Accordingly, *Seifert* does not anticipate claim 1.

Additionally, *Seifert* also does not teach the feature of, "responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set," as in claim 1. The Examiner asserts otherwise, stating that, "if there is no intersection, there is no match to the searching criteria." However, this statement is also in error and has no basis in *Seifert*.

As described above with respect to the objection, the term "empty" does not mean that no intersection exists. The intersection exists, even if empty. In the claimed case, the fact that the set is empty prompts the claimed response. *Seifert* does not provide any indication that if the set is *empty* to take the action of *providing an indication*, in the manner recited in claim 1. *Seifert* simply is devoid of disclosure in this regard. Therefore, under the standards of *In re Bond*, *Seifert* does not anticipate claim 1 or any other claim in this grouping of claims.

C. GROUND OF REJECTION 2 (Claims 2-7, 18-23, 34-39, and 50-55)

The appeal to the second ground of rejection is whether the Examiner failed to state a *prima facie* obviousness rejection against claims 2-7, 18-23, 34-39, and 50-55 under 35 U.S.C. § 103 in view of *Siefert* and *Asherman*. Claim 2 is a representative claim of this grouping of claims. Claim 2 is as follows:

2. The method of claim 1 wherein the first set of one or more data items includes numeric data.

Regarding the rejection of claim 2 the Examiner states that:

7. **Claims 2-7,18-23, 34-39 and 50-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siefert (US Publication No. 200210194179) in the view of Asherman (US Patent 6738775).** *Siefert* teaches all the limitations disclosed in claims 1, 17, 33 and 49, however he does not explicitly teach that the first data set comprises numeric, string, date, graphical, sound and video data. *Asherman* teaches a database communication system wherein the database supports all of the above listed file types (column 7, lines 61 and 62; column 11, lines 24-29). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to store any or all of the above listed file formats in the database, because all those file type are very well known in the art and there often is a need for storing those file in well organized data set (database).

Final office action of March 7, 2007, pp. 4-5 (emphasis in original).

B.1. The Proposed Combination of References, Considered as a Whole, Does Not Teach or Suggest the Features of Claim 2

Claim 2 depends from claim 1. The rejection of claim 2 depends on the rejection of claim 1 in that the Examiner asserts that *Siefert* teaches all of the features of claim 1 as part of rejecting claim 2. However, as shown above, *Siefert* does not teach at least two of the features of claim 1. Given the complete lack of disclosure in this regard, *Siefert* also does not suggest those claimed features.

Additionally, *Asherman* does not teach or suggest the features of claim 1. *Asherman* teaches a computer system including one or more local users and one or more remote users. *Asherman*, Abstract. Each of the local users and remote users communicate with a database via respective telecommunications lines and/or an intermediate computer network. Id. All calls to the database in a transaction between the local or remote user and the database are packaged into a single communication between the user and the database. Id. The results are similarly packaged and communicated back to the user. Id.

However, *Asherman* does not teach or suggest the claimed features of, “creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule,” and “responsive to a determination that the intersection of the selected set and the profile set is empty,

providing an indication that the data store does not include data items in the selected set,” as in claim 1. Therefore, the proposed combination of references, considered as a whole, does not teach or suggest these claimed features. Accordingly, under the standards of *In re Royka*, the Examiner failed to state a *prima facie* obviousness rejection against claim 2 or any other claim in this grouping of claims.

B.2. No Sufficient Reason To Combine the References Has Been Stated

Additionally, the Examiner failed to state a *prima facie* obviousness rejection against claim 2 because the Examiner failed to state a proper reason to combine the references under the standards of *KSR Int'l*. Regarding a reason to combine the references, the Examiner states that, “It would have been obvious ... to store any or all of the above listed file formats in the database, because all those file type are very well known in the art and there often is a need for storing those file in well organized data set (database).”

The Examiner’s asserted reason to combine the references is that (1) the file formats are well known and (2) a need often exists for storing those files in a database. Regarding the first statement, the Examiner has not provided a reason at all. Simply asserting that a fact is well known provides no reasoning whatsoever that the fact should be combined with some other fact to achieve a particular claimed invention. Many patentable inventions are created by combining “well known” facts.

The second statement, that a need often exists for storing the claimed file types in a database, is overly-broad to serve as a reason to combine completely disparate references to achieve the invention of claim 2. Claim 1 is directed to a method for extracting data from a data store comprising a first set of one or more data items. Claim 2 recites that the first set of one or more data items include numeric data. The fact that numeric data can be, and often is, stored in databases does not provide a reason to combine the technology of *Asherman* with the unrelated technology of *Siefert* to achieve the claimed method, when the claimed method is considered as a whole, and the combination of references is considered as a whole.

Additionally, the fact that “a need exists for storing numeric data in a database” is so broad that *any* conclusion can be drawn with respect to storing data in databases. For example, no reason exists to assume that, given thousands or millions of possible conclusions regarding the stated need,

one of ordinary skill would combine the specific references of *Asherman* and *Siefert*, considered a whole, to achieve the specific invention of claim 2. Therefore, the Examiner has provided no rational basis under the standards of *KSR Int'l.* to combine the references to achieve the invention of claim 1. Accordingly, the Examiner failed to state a *prima facie* obviousness rejection against claim 2 or any other claim in this grouping of claims.

B.3. Asherman Is Non-Analogous Art

The Examiner has failed to state a *prima facie* obviousness rejection because *Asherman* is non-analogous art. In order to rely on a reference as a basis for rejection, the reference must be either in the applicant's field of endeavor or, if not, then reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 442, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986).

In the case at hand, *Asherman* is not in the same field of endeavor of claim 2 and *Asherman* is not reasonably pertinent to the particular problem with which Applicants were concerned. With regard to the first part of the test for analogous art, *Asherman* is not in the same field of endeavor of claim 2 because *Asherman* is in the field of remote database communication. In contrast, claim 2 is in the field of searching data stores. The two fields are distinct from each other because communication with a database is not the same as techniques for searching for information within a database. Thus, *Asherman* fails the first test of *In re Oetiker*.

With regard to the second part of the test for analogous art, *Asherman* is not reasonably pertinent to the particular problem with which Applicants were concerned. As established above, *Asherman* is in the field of remote database communication. Specifically, *Asherman* is directed to the problem of increasing the speed of remote database communication. For example, *Asherman* provides that:

One such problem is the limited bandwidth available to the average user, who connects his personal computer to the Internet via a dial-up connection, i.e., via a modem.

Asherman, col. 1, ll. 34-36.

In contrast, claim 2 is directed to the problem of extracting information from selected sets of data within a data store. The problem addressed by *Asherman* is distinct from the problem

addressed by claim 2. For this reason, *Asherman* is not reasonably pertinent to the particular problem with which Applicants were concerned. Therefore, *Asherman* fails the second part of the *In re Oetiker* test for analogous art.

As established above, *Asherman* fails both tests for analogous art set forth by *In re Oetiker*. Therefore, *Asherman* is non-analogous art. For this reason, the Examiner can not use *Asherman* when fashioning an obviousness rejection against claim 2. Accordingly, the Examiner has failed to state a *prima facie* obviousness rejection against claim 2.

D. GROUND OF REJECTION 3 (Claims 14, 30, 46, and 62)

The appeal to the third ground of rejection is whether the Examiner failed to state a *prima facie* obviousness rejection against claims 14, 30, 46, and 62 under 35 U.S.C. § 103 in view of *Siefert* and *Kolovson*. Claim 14 is a representative claim of this grouping of claims. Claim 14 is as follows:

14. The method of claim 13 wherein the plurality of disk storage devices includes a redundant array of independent disks.

Regarding the rejection of claim 2 the Examiner states that:

8. Claims 14, 30, 46 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siefert (US Publication No. 200210194179) in the view of Kolovson (US Patent 5951695). *Siefert* teaches all the limitations disclosed in claims 13, 29, 45 and 61 respectively, except for the plurality of disk storage devices including a redundant array of independent disks. *Kolovson* teaches a database set up into a Redundant Array of Independent disks (column 4, lines 38-47). It would have been obvious to one of the ordinary skill in the art during the time the invention was made, to use RAID set up for the database in order to minimize possible loss of the important data or/and increase the speed of the access time (wherein the specific advantages depend on specific RAID type).

Final office action of March 7, 2007, p. 5 (emphasis in original).

D.1. The Proposed Combination of References, Considered as a Whole, Does Not Teach or Suggest the Features of Claim 14

Claim 14 depends from claim 1. The rejection of claim 14 depends on the rejection of claim 1 in that the Examiner asserts that *Siefert* teaches all of the features of claim 1 as part of

rejecting claim 14. However, as shown above, *Siefert* does not teach at least two of the features of claim 1. Given the complete lack of disclosure in this regard, *Siefert* also does not suggest those claimed features.

Additionally, *Kolovson* does not teach or suggest the features of claim 1. *Kolovson* teaches a database system that facilitates quick failover. *Kolovson*, Abstract. The database system includes a primary node, a standby node and a fast interconnect between the primary node and the standby node. *Id.* The primary node includes a primary buffer pool which stores pages of the database information, and a log storage which receives a log of updates for the pages within the primary buffer pool. *Id.* When a page is to be updated by a primary node, the primary node sends a copy of an update image of the page to the standby node. *Id.* When the primary log writes logs of updates to the log storage, the primary node also forwards the logs of updates to the standby node. *Id.*

However, *Kolovson* does not teach or suggest the claimed features of, “creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule,” and “responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set,” as in claim 1. Therefore, the proposed combination of references, considered as a whole, does not teach or suggest these claimed features. Accordingly, under the standards of *In re Royka*, the Examiner failed to state a *prima facie* obviousness rejection against claim 14 or any other claim in this grouping of claims.

D.2. Kolovson Is Non-Analogous Art

The Examiner has failed to state a *prima facie* obviousness rejection because *Kolovson* is non-analogous art. In order to rely on a reference as a basis for rejection, the reference must be either in the applicant's field of endeavor or, if not, then reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 442, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986).

In the case at hand *Kolovson* is not in the same field of endeavor of claim 14 and *Kolovson* is not reasonably pertinent to the particular problem with which Applicants were concerned. With

regard to the first part of the test for analogous art, *Kolovson* is not in the same field of endeavor of claim 14 because *Kolovson* is in the field of remote database crash recovery. In contrast, claim 14 is in the field of searching data stores. The two fields are distinct from each other because database crash recovery is not the same as techniques for searching for information within a database. Thus, *Kolovson* fails the first test of *In re Oetiker*.

With regard to the second part of the test for analogous art, *Kolovson* is not reasonably pertinent to the particular problem with which Applicants were concerned. As established above, *Kolovson* is in the field of database crash recovery. Specifically, *Kolovson* is directed to the problem of increasing the availability of database crash recovery systems. For example, *Kolovson* provides that:

Although this use of redundant hardware and software components is considered a fault-tolerant system, the problem with this approach is that it is based on proprietary hardware and operating system, and is therefore less competitive from a price/performance perspective. The industry trend is rapidly moving toward building scalable, highly available (HA) DBMS systems from commodity off-the-shelf (COTS) technology. As this trend evolves, the scalability and HA characteristics of these systems may approach that of the proprietary fault-tolerant systems, and at a substantially reduced price. An example of a HA infrastructure is HA cluster products available from Hewlett-Packard Company, having a business address of 3000 Hanover Street, Palo Alto, Calif. 94304. In the HA cluster products available from Hewlett-Packard Company, the HA infrastructure is provided by MC/ServiceGuard high availability clustering system, also available from Hewlett-Packard Company, operating on the HP-UX operating system, available from Hewlett-Packard Company as well.

Kolovson, col. 2, ll. 45-64.

In contrast, claim 14 is directed to the problem of extracting information from selected sets of data within a data store. The problem addressed by *Kolovson* is distinct from the problem addressed by claim 14. For this reason, the *Kolovson* is not reasonably pertinent to the particular problem with which Applicants were concerned. Therefore, *Kolovson* fails the second part of the *In re Oetiker* test for analogous art.

As established above, *Kolovson* fails both tests for analogous art set forth by *In re Oetiker*. Therefore, *Kolovson* is non-analogous art. For this reason, the Examiner can not use *Kolovson* when fashioning an obviousness rejection against claim 14. Accordingly, the Examiner has failed to state a *prima facie* obviousness rejection against claim 14.

E. GROUND OF REJECTION 4 (Claims 16, 32, 48, and 64)

The appeal to the fourth ground of rejection is whether the Examiner failed to state a *prima facie* obviousness rejection against claims 16, 32, 48, and 64 under 35 U.S.C. § 103 in view of *Siefert* and *Jiang*. Claim 16 is a representative claim of this grouping of claims. Claim 16 is as follows:

16. The method of claim 1 wherein the creating a profile step take place when the data store is idle.

Regarding the rejection of claim 2 the Examiner states that:

9. Claims 16, 32, 48 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siefert (US Publication No. 200210194179) in the view of Jiang et al (US Patent No. 6385641). *Siefert* discloses all the limitations disclosed in claims 1, 17, 33 and 49 respectively, however he does not explicitly teach that the creating profile step takes place when the data store is idle. *Jinag* teaches prefetching data when network link and files are in idle state (column 1, lines 47-55). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to create profile while the files are in idle state similarly to the teaching by *Jinag*, because this would allow to utilize the stored file without additional burden on those who attempt to access files, i.e. if more than one task would be performed at the same time, this could slow down all the users from accessing a file and in some situation could lead to overload.

Final office action of March 7, 2007, pp. 5-6 (emphasis in original).

Claim 16 depends from claim 1. The rejection of claim 16 depends on the rejection of claim 1 in that the Examiner asserts that *Siefert* teaches all of the features of claim 1 as part of rejecting claim 16. However, as shown above, *Siefert* does not teach at least two of the features of claim 1. Given the complete lack of disclosure in this regard, *Siefert* also does not suggest those claimed features.

Additionally, *Jiang* does not teach or suggest the features of claim 1. *Jiang* teaches a prefetching scheme consisting of two modules: a prediction module and a threshold module. *Jiang*, Abstract. After a request for a new file is satisfied, the prediction module immediately updates a database of history information if needed, and computes the access probability for each candidate file, where the access probability of a file is an estimate of the probability with which that file will

be requested by the user in the near future. Id. Next, the threshold module determines the prefetch threshold for each related server, which contains at least one candidate file with nonzero access probability. Id. The threshold is determined in real time based on current network conditions. Id. Finally, each file whose access probability exceeds or equals its server's prefetch threshold is prefetched. Id. When prefetching a file, the file is actually downloaded if and only if no up-to-date version of the file is available on the local computer; otherwise no action is taken. Id.

However, *Jiang* does not teach or suggest the claimed features of, “creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule,” and “responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set,” as in claim 1. Therefore, the proposed combination of references, considered as a whole, does not teach or suggest these claimed features. Accordingly, under the standards of *In re Royka*, the Examiner failed to state a *prima facie* obviousness rejection against claim 16 or any other claim in this grouping of claims.

F. CONCLUSION

As shown above, *Seifert* does not anticipate the claims and the Examiner has failed to state a *prima facie* obviousness rejection against any of the claims. Therefore, Applicants request that the Board of Patent Appeals and Interferences reverse the rejections. Additionally, Applicants request that the Board direct the Examiner to allow the claims.

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CLAIMS APPENDIX

The text of the claims involved in the appeal is as follows:

1. A method for extracting data from a data store comprising a first set of one or more data items, the method comprising the steps of:

creating a selected set comprising a second set of one or more data items in accordance with a selection rule;

creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule;

responsive to a determination that an intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data items from the data store in accordance with the selection rule; and

responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set.

2. The method of claim 1 wherein the first set of one or more data items includes numeric data.
3. The method of claim 1 wherein the first set of one or more data items includes string data.
4. The method of claim 1 wherein the first set of one or more data items includes date information.

5. The method of claim 1 wherein the first set of one or more data items includes graphical data.
6. The method of claim 1 wherein the first set of one or more data items includes sound data.
7. The method of claim 1 wherein the first set of one or more data items includes video data.
8. The method of claim 1 wherein the data store includes a relational database.
9. The method of claim 1 wherein the data store includes a hierarchical database.
10. The method of claim 1 wherein the data store includes an object oriented database.
11. The method of claim 1 wherein the data store includes an input/output software library.
12. The method of claim 1 wherein the data store includes a disk storage device.
13. The method of claim 1 wherein the data store includes a plurality of disk storage devices.
14. The method of claim 13 wherein the plurality of disk storage devices includes a redundant array of independent disks.

15. The method of claim 1 wherein the data store includes a random access memory.
16. The method of claim 1 wherein the creating a profile step take place when the data store is idle.
17. A computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for performing, when said product is run on a computer, the method of, extracting data from a data store comprising a first set of one or more data items, the method comprising the steps of:
- creating a selected set comprising a second set of one or more data items in accordance with a selection rule;
 - creating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule;
 - responsive to a determination that the intersection of the selected set and the profile set is non-empty, extracting a fourth set of one or more data items from the data store in accordance with the selection rule; and
 - responsive to a determination that the intersection of the selected set and the profile set is empty, providing an indication that the data store does not include data items in the selected set.
18. The computer program product claim 17 wherein the first set of one or more data items includes numeric data.

19. The computer program product claim 17 wherein the first set of one or more data items includes string data.
20. The computer program product claim 17 wherein the first set of one or more data items includes date information.
21. The computer program product claim 17 wherein the first set of one or more data items includes graphical data.
22. The computer program product claim 17 wherein the first set of one or more data items includes sound data.
23. The computer program product claim 17 wherein the first set of one or more data items includes video data.
24. The computer program product claim 17 wherein the data store includes a relational database.
25. The computer program product claim 17 wherein the data store includes a hierarchical database.
26. The computer program product claim 17 wherein the data store includes an object oriented database.

27. The computer program product claim 17 wherein the data store includes an input/output software library.
28. The computer program product claim 17 wherein the data store includes a disk storage device.
29. The computer program product claim 17 wherein the data store includes a plurality of disk storage devices.
30. The computer program product claim 29 wherein the plurality of disk storage devices includes a redundant array of independent disks.
31. The computer program product claim 17 wherein the data store includes a random access memory.
32. The computer program product claim 17 wherein the creating a profile step takes place when the data store is idle.
33. A computer program product stored on a computer usable medium, comprising:
computer readable program means for storing data, the means for storing data being operable to store a first set of one or more data items;
computer readable program means for creating a selected set, wherein the selected set

comprises a second set of one or more data items in accordance with a selection rule;

computer readable program means for generating a profile of the first set of one or more data items, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; and

computer readable program means for determining if there is a non-empty intersection of the selected set and the profile set.

34. The computer program product of claim 33 wherein the first set of one or more data items includes numeric data.

35. The computer program product of claim 33 wherein the first set of one or more data items includes string data.

36. The computer program product of claim 33 wherein the first set of one or more data items includes date information.

37. The computer program product of claim 33 wherein the first set of one or more data items includes graphical data.

38. The computer program product of claim 33 wherein the first set of one or more data items includes sound data.

39. The computer program product of claim 33 wherein the first set of one or more data items includes video data.
40. The computer program product of claim 33 wherein the computer readable program means for storing data includes a relational database.
41. The computer program product of claim 33 wherein the computer readable program means for storing data includes a hierarchical database.
42. The computer program product of claim 33 wherein the computer readable program means for storing data includes an object oriented database.
43. The computer program product of claim 33 wherein the computer readable program means for storing data includes an input/output software library.
44. The computer program product of claim 33 wherein the computer readable program means for storing data includes a disk storage device.
45. The computer program product of claim 33 wherein the computer readable program means for storing data includes a plurality of disk storage devices.
46. The computer program product of claim 45 wherein the plurality of disk storage devices includes a redundant array of independent disks.

47. The computer program product of claim 33 wherein the computer readable program means for storing data includes a random access memory.

48. The computer program product of claim 33 further comprising generating the profile when the computer readable program is idle.

49. An apparatus having a data store operable to store a first set of one or more data items, the apparatus further comprising:

a selector for creating a selected set, wherein the selected set comprises a second set of one or more data items in accordance with a selection rule;

a profiler for generating a profile of the data store, the profile comprising a profile rule defining a profile set, wherein the profile set comprises a third set of one or more data items in accordance with the profile rule; and

a selection checker for determining if there is a non-empty intersection of the selected set and the profile set.

50. The apparatus of claim 49 wherein the first set of one or more data items includes numeric data.

51. The apparatus of claim 49 wherein the first set of one or more data items includes string data.

52. The apparatus of claim 49 wherein the first set of one or more data items includes date information.
53. The apparatus of claim 49 wherein the first set of one or more data items includes graphical data.
54. The apparatus of claim 49 wherein the first set of one or more data items includes sound data.
55. The apparatus of claim 49 wherein the first set of one or more data items includes video data.
56. The apparatus of claim 49 wherein the first set of one or more data items includes a relational database.
57. The apparatus of claim 49 wherein the data store includes a hierarchical database.
58. The apparatus of claim 49 wherein the data store includes an object oriented database.
59. The apparatus of claim 49 wherein the data store includes an input/output software library.
60. The apparatus of claim 49 wherein the data store includes a disk storage device.

61. The apparatus of claim 49 wherein the data store includes a plurality of disk storage devices.

62. The apparatus of claim 61 wherein the plurality of disk storage devices includes a redundant array of independent disks.

63. The apparatus of claim 49 wherein the data store includes a random access memory.

64. The apparatus of claim 49 wherein the profiler generates the profile when the data store is idle.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.